



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street, Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

Office of Preparedness & Response

Sherry Adams, R.N., C.P.M., Director

Isaac P. Ajit, M.D., M.P.H., Deputy Director

December 11, 2009

Public Health & Emergency Preparedness Bulletin: # 2009:48 Reporting for the week ending 12/05/09 (MMWR Week #48)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

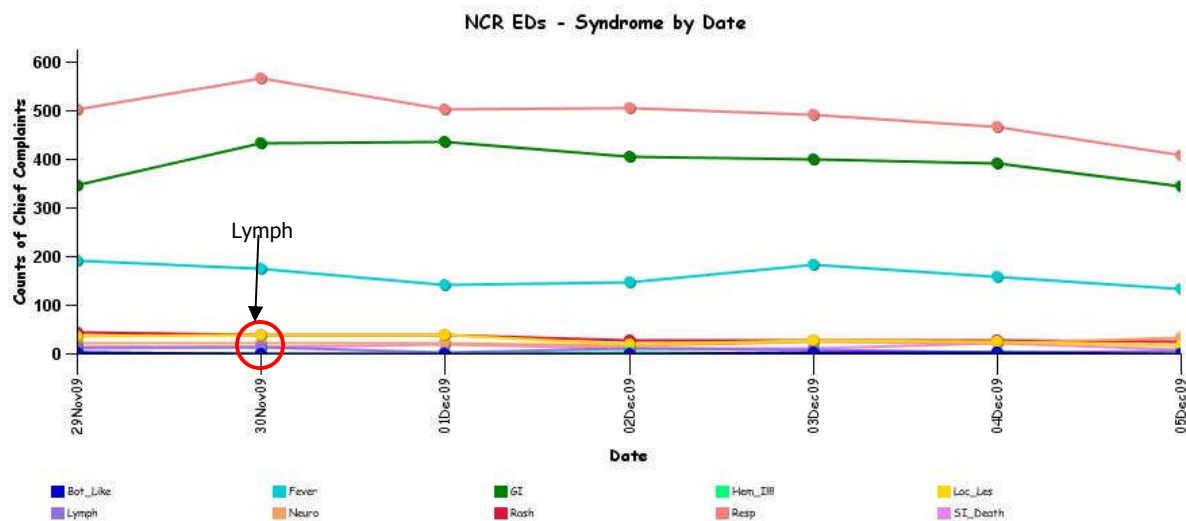
SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled.

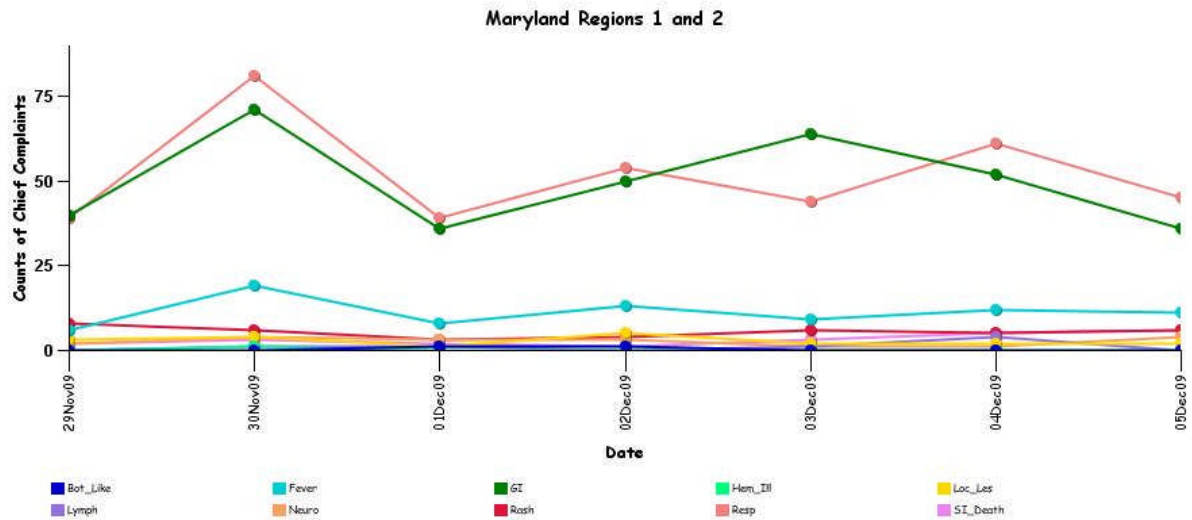
Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

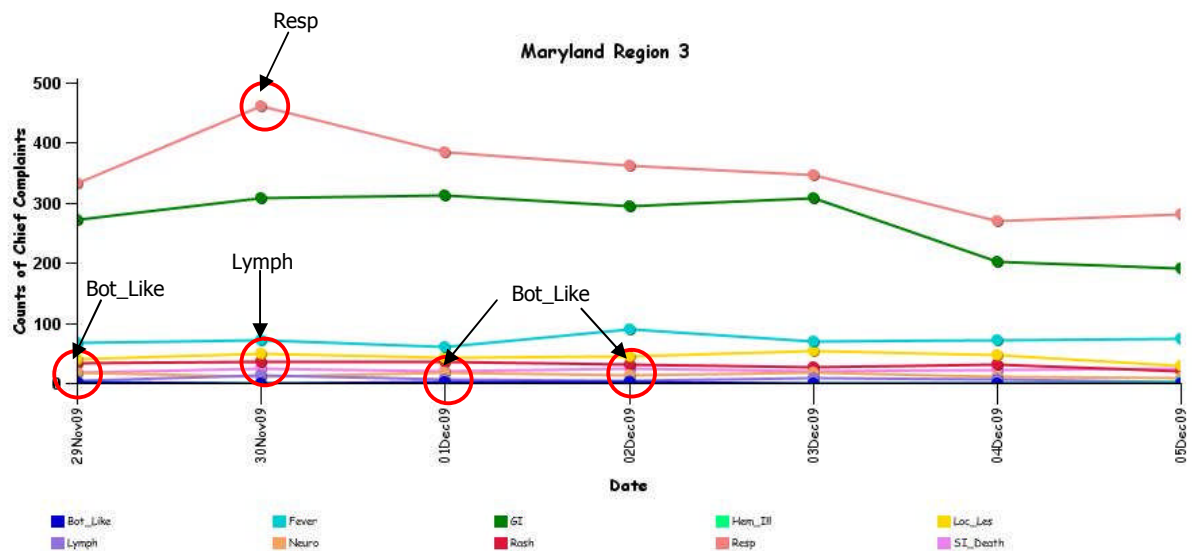


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

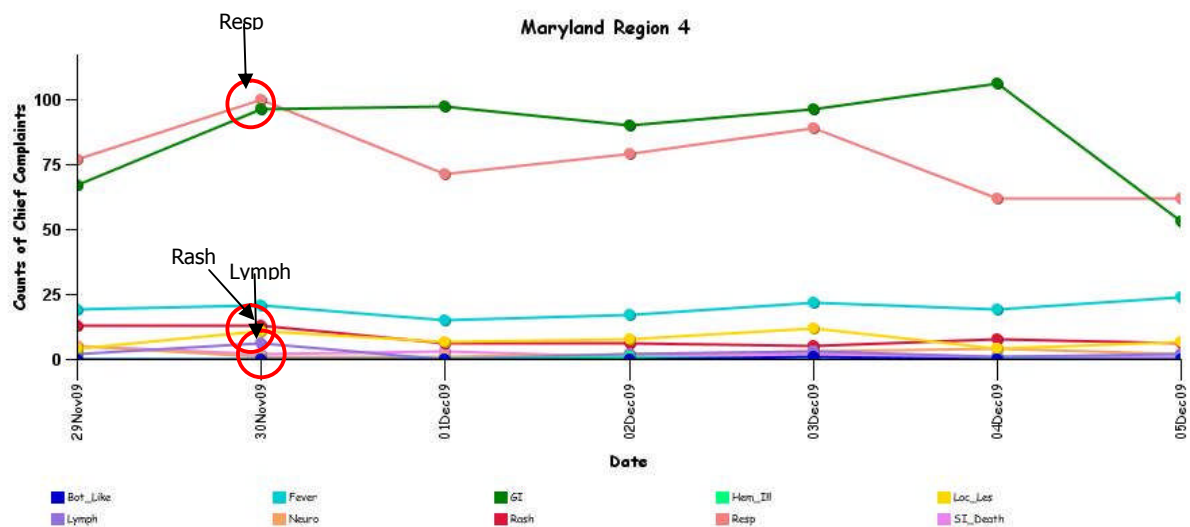
MARYLAND ESSENCE:



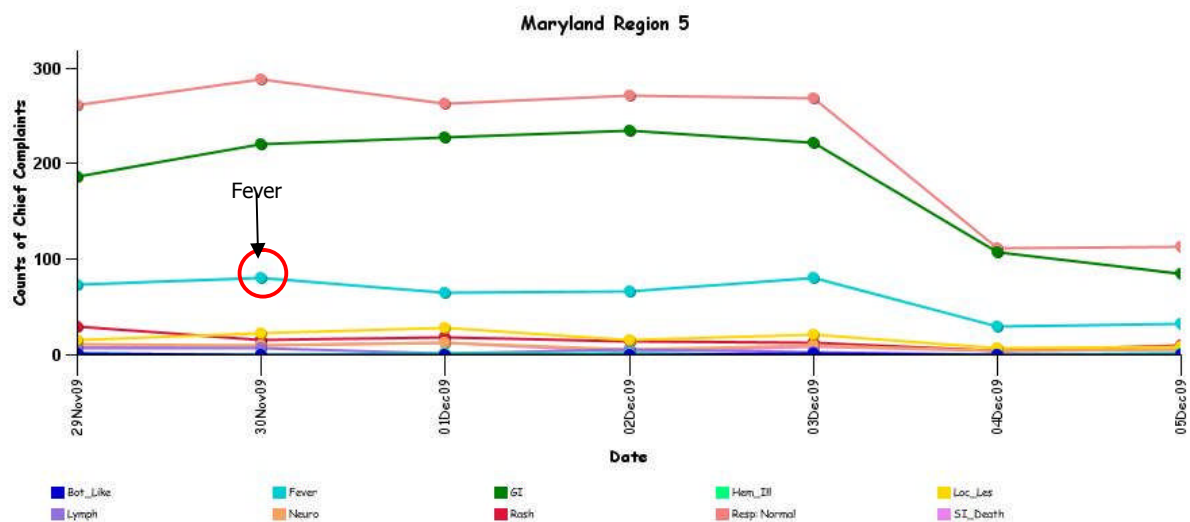
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



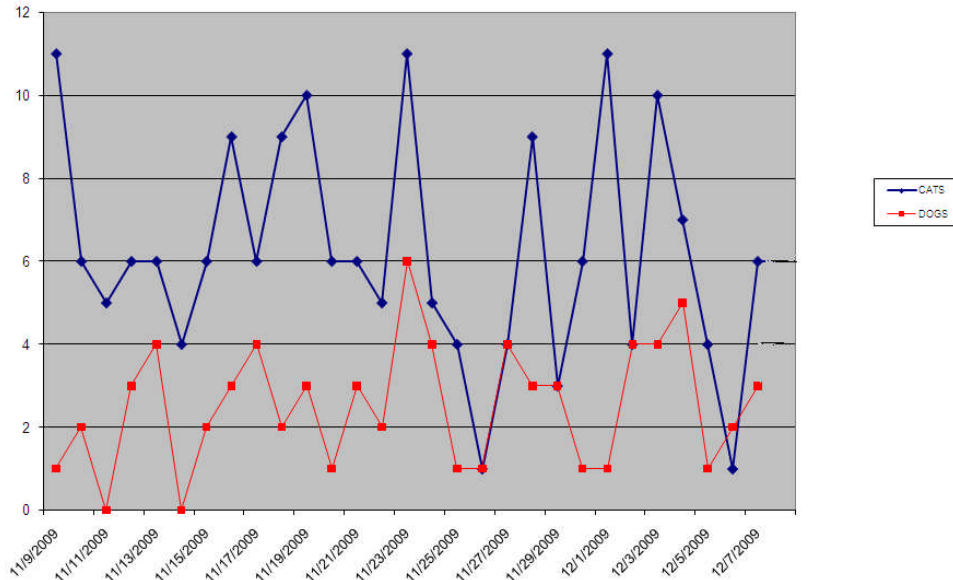
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.

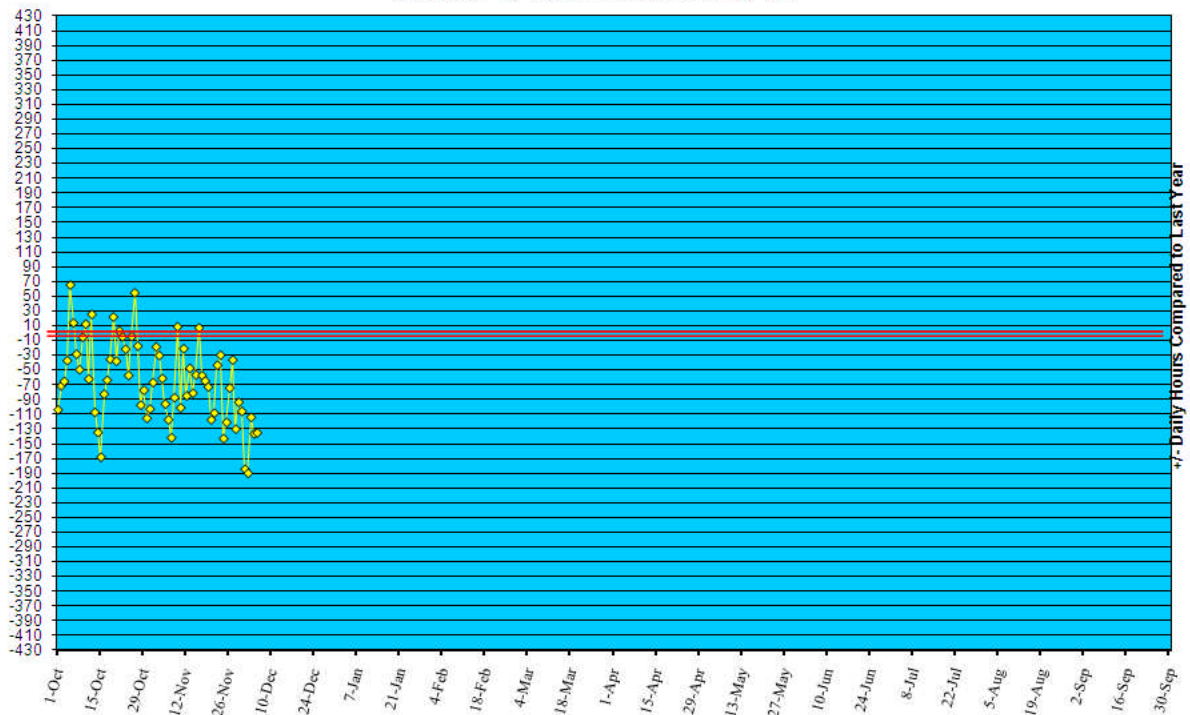
Dead Animal Pick-Up Calls to 311



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.

**Statewide Yellow Alert Comparison
Daily Historical Deviations
October 1, '09 to December 5, '09**



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in October 2009 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (Nov 29- Dec 05, 2009):	18	0
Prior week (Nov 22- Nov 28, 2009):	08	0
Week#48, 2008 (Nov 23- Nov 29, 2008):	13	0

OUTBREAKS: 1 outbreak was reported to DHMH during MMWR Week 48 (November 29- December 05, 2009):

1 Respiratory illness outbreak

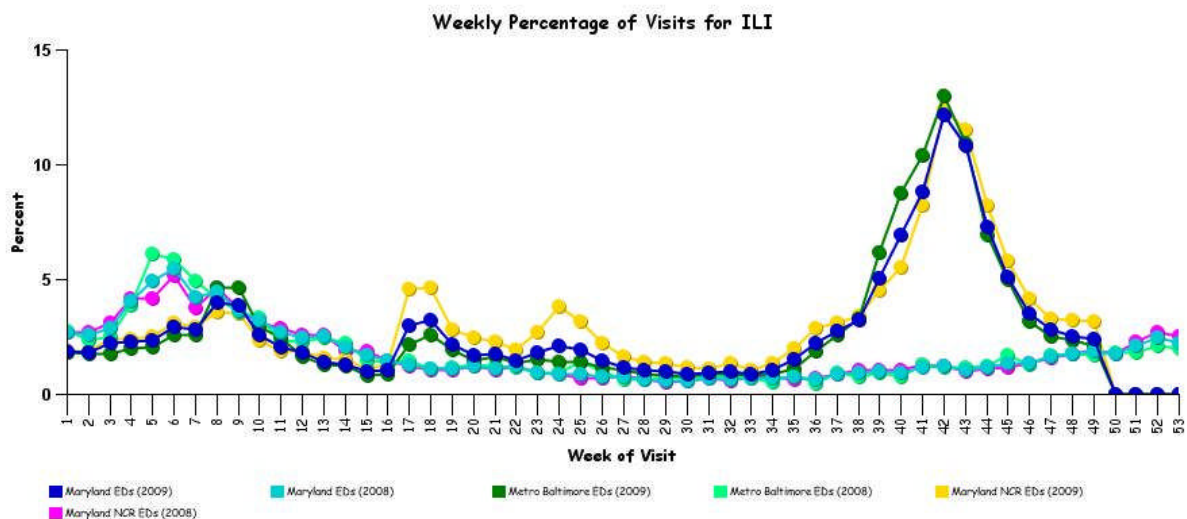
1 outbreak of ILI associated with a Daycare Center

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 48 is WIDESPREAD.

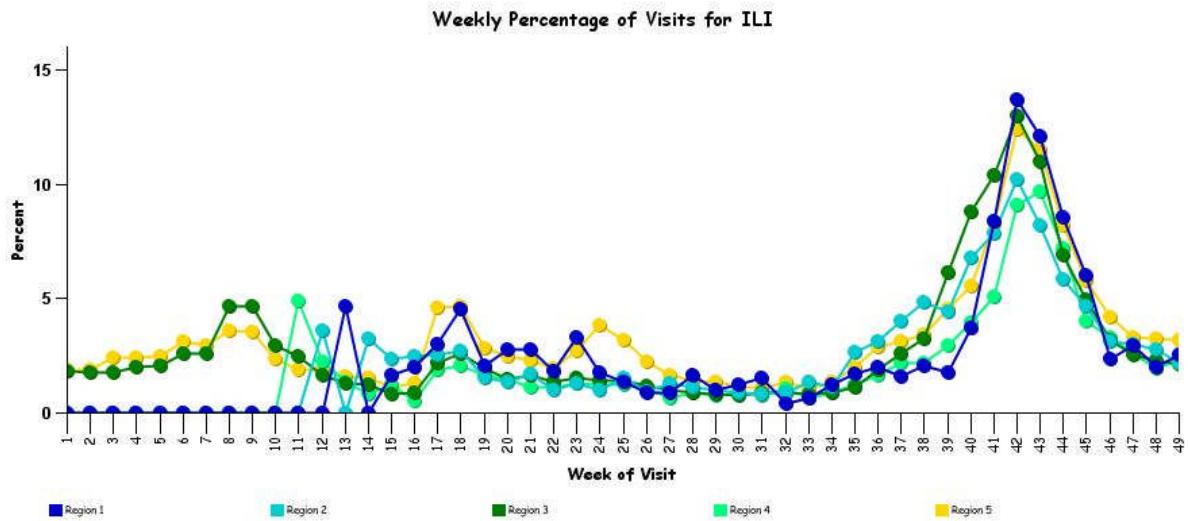
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



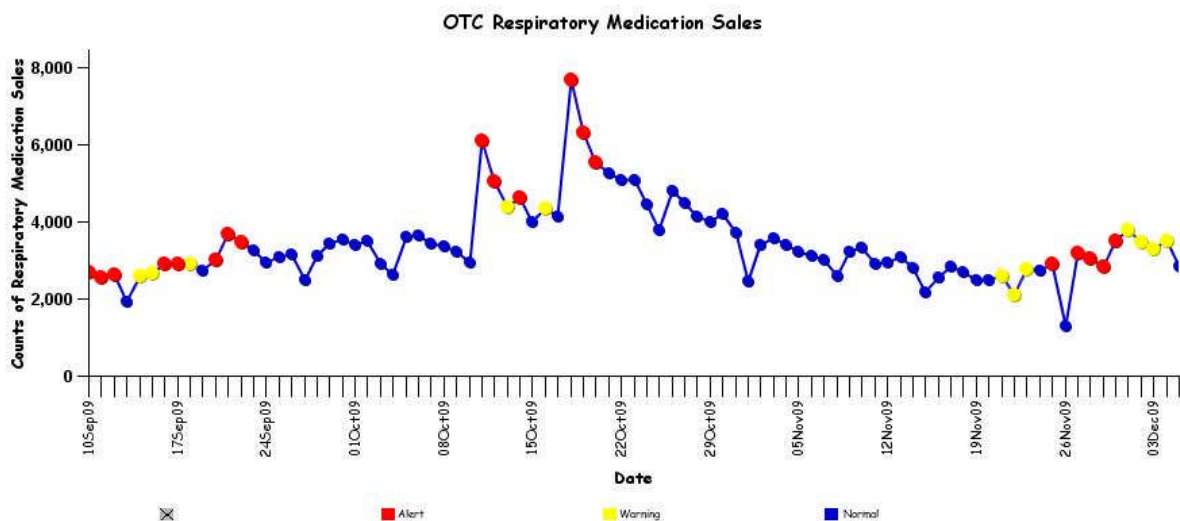
* Includes 2008 and 2009 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2009 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5
 2009 data for these regions are depicted separately to establish baselines, due to the addition of new hospitals in these regions.

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

****More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at:**
[http://preparedness.dhmm.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex\(Vers7.2\).pdf](http://preparedness.dhmm.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Vers7.2).pdf)

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of November 27, 2009, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 444, of which 262 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

AVIAN INFLUENZA, HUMAN (VIET NAM): 01 Dec 2009, A patient, 23 years of age, resident of Sam Min city of Dien Bien, had eaten quantities of duck soup for about a week before he fell ill. His death is the 5th fatality this year [2009] as a consequence of avian influenza H5N1 virus infection. According to the Department of Preventive Health and Environment (Ministry of Health), on 18 Nov 2009 the patient developed sudden high fever, cough, and shortness of breath. 6 days later his medical condition worsened and he was transferred on 25 Nov 2009 to the Clinic in the area of Phu. A day later he was transferred to the provincial hospital in Dien Bien, was diagnosed with severe pneumonia and he received antibiotic and antipyretic treatment. The patient's condition continued to deteriorate and he died on 28 Nov 2009. On 29 Nov 2009 the Institute of Hygiene and Epidemiology reported that the patient had tested positive for H5N1 virus infection.

AVIAN INFLUENZA, HUMAN (INDONESIA): 30 Nov 2009, A 37-year-old resident of Tanjuang Durian, suspected to have contracted bird flu [avian influenza A/(H5N1)] virus, [has been] admitted to M Djamil hospital. The patient is a duck farmer who had been raising hundreds of ducks. He is reported to have found that almost of all his ducks suddenly died. Subsequent to this [event], he buried the dead ducks. He developed high fever at noon the same day, and his family gave him an antipyretic drug, a brand of paracetamol. His fever [increased during] the afternoon and his family took him to Pasa Baru Public Health Center in the evening. The Public Health Center then referred the patient to M Zein Painan Hospital, where he was diagnosed as a bird flu suspect. The patient was transferred then to M Djamil hospital to receive [more appropriate] treatment as a suspected bird flu patient.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA (H1N1) 2009, VACCINE SAFETY: 05 Dec 2009, The Food and Drug Administration (FDA) licensed the 1st 2009 influenza A (H1N1) monovalent vaccines ("H1N1 vaccines") on 15 Sep 2009. The H1N1 vaccines are available as a live, attenuated monovalent vaccine (LAMV) for intranasal administration and as monovalent, inactivated, split-virus or subunit vaccines for injection (MIV). The licensure and manufacturing processes for the monovalent H1N1 vaccines were the same as those used for seasonal trivalent inactivated (TIV) or trivalent live, attenuated influenza vaccine (LAIV); none of these vaccines contains an adjuvant. Vaccine safety monitoring is an important component of all vaccination programs. To assess the safety profile of H1N1 vaccines in the United States, the Centers for Disease Control and Prevention (CDC) reviewed vaccine safety results for the H1N1 vaccines from 3783 reports received through the U.S. Vaccine Adverse Event Reporting System (VAERS) and electronic data from 438 376 persons vaccinated in managed-care organizations in the Vaccine Safety Datalink (VSD), a large, population-based database with administrative and diagnostic data, in the 1st 2 months of reporting (as of 24 Nov 2009). VAERS data indicated 82 adverse event reports per 1 million H1N1 vaccine doses distributed, compared with 47 reports per 1 million seasonal influenza vaccine doses distributed. However, no substantial differences between H1N1 and seasonal influenza vaccines were noted in the proportion or types of serious adverse events reported. No increase in any adverse events under surveillance has been seen in VSD data. Many agencies are using multiple systems to monitor H1N1 vaccine safety. Health-care providers and the public are encouraged to report adverse health events that occur after vaccination.

INFLUENZA PANDEMIC (H1N1) 2009 (CHINA): 03 Dec 2009, The Chinese mainland saw a faster increase in deaths from [pandemic 2009] A/H1N1 influenza in the past weeks, according to the Ministry of Health. A total of 74 deaths were reported in the week from 23 to 29 Nov 2009, stated a notice issued on the Ministry's website on Wednesday [2 Dec 2009]. Reported deaths in the previous 2 weeks were 28 and 51, respectively. About 91 percent of all the flu cases reported last week were of the [pandemic] A/H1N1 strain, compared with 89.8 percent in the previous week, the notice stated. The Ministry advised the public to keep warm in the cold weather, wash hands frequently and keep rooms ventilated. As of Mon [30 Nov 2009], more than 27 million people nationwide had been inoculated with China-made A/H1N1 vaccine, according to the Ministry. Four deaths had been reported after vaccination, and 3 had been confirmed as unrelated to the vaccine, while the cause of the other is not yet clear, the Ministry said.

INFLUENZA PANDEMIC (H1N1) 2009, Animals, (USA: VIRGINIA, CALIFORNIA): 02 Dec 2009, The pandemic H1N1 flu virus was confirmed in a flock of breeder turkeys in Virginia -- the 1st US case involving turkeys, the US Agriculture Department said

on Monday [30 Nov 2009]. The virus also has been found in hogs, 3 house cats, pet ferrets, and a cheetah in California [presumably a zoo animal who caught it from its keeper -- cheetahs are native to Africa. USDA said infections of turkeys have been reported previously in Canada and Chile. "This is the 1st detection of 2009 pandemic H1N1 influenza in turkeys in the United States," said a USDA spokesperson. "There is a possibility that a worker, who was sent home ill with flu-like symptoms, could have infected the turkeys as a result of the artificial insemination processes, as the worker was a member of the insemination crew." USDA said people cannot get the flu from eating [properly cooked] turkey meat. [Other] swine flu viruses are known to affect quails and turkeys periodically, said USDA. USDA's Agricultural Research Service conducted 2 studies this year to see if the H1N1 pandemic virus could affect turkeys or other domestic fowl. 5 turkey samples collected in mid to late November [2009] contained the virus.

INFLUENZA PANDEMIC (H1N1) 2009, ETHNICITY (UNITED STATES OF AMERICA: ALASKA): 01 Dec 2009, State and federal health officials wanted to know what kind of people were hospitalized with swine flu [pandemic (H1N1) 2009 influenza virus infection], so they studied Anchorage residents who tested positive and were admitted at 4 area hospitals over several weeks -- a total of 59 people. The biggest surprise, according to state epidemiologist Dr Joe McLaughlin: People from 2 ethnic groups -- Alaska Natives and American Indians, and Asians and Pacific Islanders -- were hospitalized at higher rates than those in any other ethnic groups. The rate for Alaska Natives was 4.5 times greater than for white people, at 50 per 100 000, said McLaughlin. Asians and Pacific Islanders weren't far behind Alaska Natives, at a rate of 41 hospitalizations per 100 000. As expected, most people of all races who were hospitalized -- 71 percent -- had another medical condition that put them at higher risk of complications from the flu. The most common pre-existing health problem was asthma, which affected 17 of those admitted, said Dr Jay Wenger, an epidemiologist with the Arctic investigation Program of the federal Centers for Disease Control and Prevention (CDC). Wenger was one of the report's authors. Heart disease was next with 10 people, and other lung diseases were next with 6 people. People might have had more than one underlying condition. 9 of the 59 people were so seriously ill they were treated in intensive care units; 1 of the 59 died. The researchers studied Anchorage residents hospitalized from 1 Sep 2009 through 21 Oct 2009 at Providence Alaska Medical Center, Alaska Regional Hospital, the Elmendorf Air Force Base hospital, and Alaska Native Medical Center. They eliminated anybody not from Anchorage, even if they were hospitalized there, so they could compare the results against Anchorage's known demographics. None of the people had received the [pandemic] H1N1 swine flu vaccine, which was first available in Alaska in limited quantities in early October [2009]. But most of the patients -- 73 percent -- were in one of the 5 priority groups established by the CDC for getting vaccinated. Wenger said researchers suspected in advance that Alaska Natives might be especially affected by swine [pandemic] flu because prior studies show that the highest rates of respiratory diseases in Alaska occur in Native people. The fact that a greater proportion of Alaska Natives are younger than 24 than the population as whole also might have contributed to Alaska Natives' higher rates of serious illness with swine [pandemic] flu in the study, said McLaughlin. Young people all across the country are more vulnerable to the swine [pandemic] flu that's taken hold this year [2009], compared with normal, seasonal flu viruses. 58 percent of the Alaska Native and Asian-Pacific Islander patients hospitalized in Anchorage during the study were young -- under age 25. Only 29 percent of the whites hospitalized were under 25. The researchers picked Anchorage to study first because there are more patients there. Wenger said the CDC will also help the state look at people hospitalized in some other parts of Alaska, including the Yukon-Kuskokwim delta.

Resources:

<http://www.cdc.gov/h1n1flu/>

<http://www.dhmv.maryland.gov/swineflu/>

NATIONAL DISEASE REPORTS

PLAGUE, FELINE (CALIFORNIA): 05 Dec 2009, The Kern County Department of Public Health has confirmed a test result positive for *Yersenia pestis*, the bacterium that causes plague, conducted on a domestic cat from Hart Flat, California. A test on another cat in the same household is pending. The Vector Control Section of the California Department of Health Services and the Kern County Environmental Health, which is now part of Public Health, are collaborating to investigate these cases. There is no evidence of human infection at this time, Kim Rodriguez with the KCDPH said. Appropriate preventive steps including antibiotics have been recommended to protect those who may have been exposed to these cats. One of the symptomatic cats is responding well to antibiotics, but one of the cats has died, Rodriguez said. "(The) plague is still very much present in our county, although we may want to believe that it is an obsolete disease of the past," says Matt Constantine, Director of Public Health. "The most effective weapons in fighting this disease are public awareness, education, and preventative measures to reduce the risk for exposure." Plague, infection with the bacterium *Y. pestis*, is endemic throughout the southwest United States, including much of Kern County. Each year numerous mammals, including domestic cats, are identified with evidence of infection with *Y. pestis*, Rodriguez said. Cats are believed to be the domestic species most susceptible to plague. As in humans, 3 clinical syndromes have been described: bubonic, septicemic, and pneumonic. Bubonic is the most common manifestation and is characterized by high fever (105-106 degrees F), lethargy, and swollen lymph glands, most commonly of the glands of the neck and under the jaw in cats but in the inguinal area in humans. Infected lymph nodes may spontaneously abscess and drain, Rodriguez said. Cats can pose a risk of plague transmission to humans. Because of the potential for transmission to humans, cats suspected of having plague should be hospitalized and placed in isolation. Persons having significant contact with a plague-infected cat, particularly cats with respiratory signs or draining abscesses should consult with their health care provider regarding the need for a prophylactic course of antibiotics. Local and state public health officials should be notified immediately of cases of plague diagnosed in domestic cats, Rodriguez said. (Plague is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

JAPANESE ENCEPHALITIS (INDIA): 05 Dec 2009, The eastern districts of Uttar Pradesh have been affected by encephalitis and the death toll has risen to 552 here. During the last 24 hours, 2 more deaths were reported at the BRD Medical College Hospital in Gorakhpur. Also, 7 new cases have been admitted to BRD Medical College Hospital and the other district hospitals of Gorakhpur and Basti divisions. According to reports, around 4000 patients have been admitted in the different hospitals of the State since January [2009]. (Viral Encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, LIVESTOCK (PHILIPPINES) 05 Dec 2009, At least 50 people from a remote Isabela village in the Philippines have been hospitalized for the last 4 weeks after partaking of anthrax-contaminated carabao [water buffalo] meat. According to reports, the victims, all residents of Dicamay 2 in Jones, Isabela, exhibited signs of anthrax infection after consuming meat of carabaos believed to have been downed by the dreaded animal disease. In addition to the number of villagers affected, reports also indicated that at least 6 carabaos have already died due to anthrax since 16 Oct 2009, prompting the Isabela veterinary office to declare an outbreak of anthrax in the entire village. "Actually we can already declare an anthrax outbreak even if only one carabao had died of the disease. Much more that, there were already 6 carabaos that have died of the said illness in the village," said provincial veterinary officer Dr. Angelo Naui. "We had already ordered the inoculation of all carabaos and other herbivorous animals in the town and other nearby areas to prevent the further spread of the disease," he said. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS, SEROTYPE ENTERITIDIS (UK): 03 Dec 2009, The Food Standards Agency and Health Protection Agency (HPA) are investigating a recent increase in the number of cases of a certain type of *Salmonella* in England and Wales. The increase in cases of *Salmonella* [enterica serotype] Enteritidis phage type (PT) 14b, since mid-August 2009, was noted by the HPA as part of its monitoring of infectious diseases. A total of 443 cases of *S.* Enteritidis PT14b have been reported to the HPA in 2009, compared with 137 cases in 2008. 14 clusters of cases in England and Wales are currently being investigated to determine if there is a common source of infection. A total of 144 cases of *S.* Enteritidis PT14b have been associated with these 14 clusters. The clusters have been linked to a number of different catering establishments and a care home. Although there is no conclusive evidence yet, the clusters may be linked to eggs sourced from outside the UK and used in these establishments. Investigations are ongoing into a possible link to eggs sourced from an approved establishment in Spain, and the UK and Spanish authorities are working in close cooperation to investigate this. In the meantime, the Agency is reminding caterers and other food businesses how to cook and prepare eggs safely. Since January 2009, all EU member states are required to have a *Salmonella* National Control Program and carry out testing for the organism in laying flocks. Although this program intends to reduce the incidence of *Salmonella* in laying flocks and the egg market, it cannot guarantee complete absence. Eggs from flocks testing positive for the organism (specifically *S.* Enteritidis or *S.* Typhimurium) are not allowed to be sold directly to consumers. Most of these eggs are instead sent for pasteurization. *Salmonella* is one of the most common causes of food poisoning in the UK and is sometimes found in unpasteurised milk, raw meat and poultry, as well as eggs and products containing raw egg. The majority of eggs on sale in shops in the UK are of UK origin, and recent surveys have shown there is a very low incidence of salmonella in UK eggs. Even so, it isn't possible to guarantee that any egg will be free from *Salmonella*, whatever the source or brand. Therefore it is important that people continue to take care to ensure the safe storage, preparation, and cooking of eggs. (Food Safety Threats is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

E. COLI O157 (UK ex SPAIN): 30 Nov 2009, A number of cases of *E. coli* O157 in travelers returning from Benidorm [province of Alicante, community of Valencia] in Spain are being investigated by the Health Protection Agency (HPA). The HPA is aware of 14 confirmed cases of the gastrointestinal infection. All the confirmed cases are adults and 4 people are known to have been admitted to hospital after returning to the U; 2 have been discharged. The agency is working with the Spanish health authorities to investigate the cases of the illness. The HPA will conduct interviews with those people affected in the UK to help identify a possible source. After being infected by the *E. coli* bacterium, it usually takes 3 to 4 days before symptoms develop, but it can be between 1 and 14 days. The HPA is advising any travelers who have recently returned from Benidorm and who suspect that they may have the *E. coli* O157 infection to contact their doctor as soon as possible. The agency also said in a statement that as the source of infection has not yet been identified, it is possible that future cases of *E. coli* O157 linked to the Spanish resort may be identified in the coming weeks. (Food Safety Threats is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmdh.maryland.gov/>

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a

definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

Sadia Aslam, MPH
Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-2074
Fax: 410-333-5000
Email: SAslam@dhhm.state.md.us